



## Complete Summary

### TITLE

Non-steroidal anti-inflammatory drug (NSAID) selection: percentage of patients who are NOT treated with a low-dose aspirin, have risk factors for GI bleeding and are prescribed an NSAID who receive either a non-selective NSAID plus a gastroprotective agent (proton pump inhibitor [PPI] or misoprostol) or a COX-2-selective NSAID.

### SOURCE(S)

MacLean CH, Saag KG, Solomon DH, Morton SC, Sampsel S, Klippel JH. Measuring quality in arthritis care: methods for developing the Arthritis Foundation's quality indicator set. *Arthritis Rheum* 2004 Apr 15;51(2):193-202. [PubMed](#)

Saag KG, Olivieri JJ, Patino F, Mikuls TR, Allison JJ, MacLean CH. Measuring quality in arthritis care: the Arthritis Foundation's quality indicator set for analgesics. *Arthritis Rheum* 2004 Jun 15;51(3):337-49. [89 references] [PubMed](#)

## Measure Domain

### PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

### SECONDARY MEASURE DOMAIN

Does not apply to this measure

## Brief Abstract

### DESCRIPTION

This measure is used to assess the percentage of patients who are NOT treated with a low-dose aspirin, have risk factors for gastrointestinal (GI) bleeding and are prescribed an NSAID who receive either a non-selective NSAID plus a gastroprotective agent (proton pump inhibitor [PPI] or misoprostol) or a cyclooxygenase 2 (COX-2)-selective NSAID.

### RATIONALE

Use of non-selective non-steroidal anti-inflammatory drugs (NSAIDs) in conjunction with a gastroprotective agent or use of cyclooxygenase 2 (COX-2) selective NSAIDs in patients with gastrointestinal (GI) risk factors and not using aspirin daily can reduce the risk of GI bleeding.

The American Academy of Orthopaedic Surgeons' clinical guidelines on osteoarthritis of the knee and the American College of Rheumatology suggest that when considering analgesics/NSAIDs, patients should be assessed for risk factors for GI or renal toxicity and if risk factors are present, a gastroprotective agent or COX-2 inhibitor should be considered.

## **PRIMARY CLINICAL COMPONENT**

Low-dose aspirin; gastrointestinal (GI) bleeding risk factors; non-selective non-steroidal anti-inflammatory drug (NSAID); gastrointestinal prophylaxis; proton pump inhibitor (PPI); misoprostol; cyclooxygenase 2 (COX-2)-selective NSAID

## **DENOMINATOR DESCRIPTION**

Patients who are NOT treated with a low-dose aspirin, have risk factors for gastrointestinal (GI) bleeding\* and are prescribed a non-steroidal anti-inflammatory drug (NSAID)

**\*Note:** For the purpose of this measure, heightened risk for GI bleeding is defined as age greater than or equal to 75 years, history of peptic ulcer disease, history of GI bleeding, or glucocorticoid use.

## **NUMERATOR DESCRIPTION**

Patients who receive either a non-selective non-steroidal anti-inflammatory drug (NSAID) plus a gastroprotective agent (proton pump inhibitor [PPI] or misoprostol) or a cyclooxygenase 2 (COX-2)-selective NSAID

## **Evidence Supporting the Measure**

### **EVIDENCE SUPPORTING THE CRITERION OF QUALITY**

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
- A systematic review of the clinical literature
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

## **Evidence Supporting Need for the Measure**

### **NEED FOR THE MEASURE**

Unspecified

## State of Use of the Measure

### STATE OF USE

Current routine use

### CURRENT USE

Internal quality improvement

## Application of Measure in its Current Use

### CARE SETTING

Ambulatory Care  
Physician Group Practices/Clinics

### PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Advanced Practice Nurses  
Physician Assistants  
Physicians

### LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

### TARGET POPULATION AGE

Unspecified

### TARGET POPULATION GENDER

Either male or female

### STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

## Characteristics of the Primary Clinical Component

### INCIDENCE/PREVALENCE

Unspecified

### ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

## BURDEN OF ILLNESS

- *Gastrointestinal (GI) risks of nonselective nonsteroidal anti-inflammatory drugs (NSAIDs)*. A number of meta-analyses have evaluated the relationship between the use of aspirin (greater than 325 mg/day) and other nonaspirin, nonselective NSAIDs and the risk for clinically defined adverse GI events. Exposure to NSAIDs has been associated with a 2.7 to 5.4-fold increased risk of various GI adverse events in these various studies.
- *GI risks of cyclooxygenase 2 (COX-2)-selective NSAIDs*. Investigations of COX-2-selective NSAIDs collectively suggest GI safety advantages over nonselective NSAIDs. However, based on secondary analyses of existing data, analysis of pooled randomized controlled trial (RCT) data, comparison with historical controls, data from endoscopic studies, and patient withdrawal rates, there appears to be a small GI risk for COX-2 users in comparison with nonusers.

## EVIDENCE FOR BURDEN OF ILLNESS

Saag KG, Olivieri JJ, Patino F, Mikuls TR, Allison JJ, MacLean CH. Measuring quality in arthritis care: the Arthritis Foundation's quality indicator set for analgesics. *Arthritis Rheum* 2004 Jun 15;51(3):337-49. [89 references] [PubMed](#)

## UTILIZATION

Unspecified

## COSTS

Unspecified

## Institute of Medicine National Healthcare Quality Report Categories

## IOM CARE NEED

Living with Illness

## IOM DOMAIN

Effectiveness  
Safety

## Data Collection for the Measure

## CASE FINDING

Users of care only

## DESCRIPTION OF CASE FINDING

Patients who are NOT treated with a low-dose aspirin, have risk factors for gastrointestinal (GI) bleeding and are prescribed an non-steroidal anti-inflammatory drug (NSAID)

#### **DENOMINATOR SAMPLING FRAME**

Patients associated with provider

#### **DENOMINATOR INCLUSIONS/EXCLUSIONS**

##### **Inclusions**

Patients who are NOT treated with a low-dose aspirin, have risk factors for gastrointestinal (GI) bleeding\* and are prescribed an non-steroidal anti-inflammatory drug (NSAID)

**\*Note:** For the purpose of this measure, heightened risk for GI bleeding is defined as age greater than or equal to 75 years, history of peptic ulcer disease, history of GI bleeding, or glucocorticoid use.

##### **Exclusions**

Unspecified

#### **RELATIONSHIP OF DENOMINATOR TO NUMERATOR**

All cases in the denominator are equally eligible to appear in the numerator

#### **DENOMINATOR (INDEX) EVENT**

Therapeutic Intervention

#### **DENOMINATOR TIME WINDOW**

Unspecified

#### **NUMERATOR INCLUSIONS/EXCLUSIONS**

##### **Inclusions**

Patients who receive either a non-selective non-steroidal anti-inflammatory drug (NSAID) plus a gastroprotective agent (proton pump inhibitor [PPI] or misoprostol) or a cyclooxygenase 2 (COX-2)-selective NSAID

##### **Exclusions**

Unspecified

#### **MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS**

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

**NUMERATOR TIME WINDOW**

Episode of care

**DATA SOURCE**

Administrative data  
Medical record  
Pharmacy data

**LEVEL OF DETERMINATION OF QUALITY**

Individual Case

**PRE-EXISTING INSTRUMENT USED**

Unspecified

**Computation of the Measure****SCORING**

Rate

**INTERPRETATION OF SCORE**

Better quality is associated with a higher score

**ALLOWANCE FOR PATIENT FACTORS**

Unspecified

**STANDARD OF COMPARISON**

Internal time comparison

**Evaluation of Measure Properties****EXTENT OF MEASURE TESTING**

A multidisciplinary expert panel comprised of nationally recognized experts discussed and rated the validity of each of the proposed measures based on the evidence and their expert opinion using a modification of the RAND/UCLA Appropriateness Method.

**EVIDENCE FOR RELIABILITY/VALIDITY TESTING**

MacLean CH, Saag KG, Solomon DH, Morton SC, Sampsel S, Klippel JH. Measuring quality in arthritis care: methods for developing the Arthritis Foundation's quality indicator set. Arthritis Rheum 2004 Apr 15;51(2):193-202. [PubMed](#)

Saag KG, Olivieri JJ, Patino F, Mikuls TR, Allison JJ, MacLean CH. Measuring quality in arthritis care: the Arthritis Foundation's quality indicator set for analgesics. Arthritis Rheum 2004 Jun 15;51(3):337-49. [89 references] [PubMed](#)

## Identifying Information

### ORIGINAL TITLE

Quality indicator 7. NSAID selection: GI bleeding risk factors and no aspirin.

### MEASURE COLLECTION

[The Arthritis Foundation's Quality Indicator Project](#)

### MEASURE SET NAME

[The Arthritis Foundation's Quality Indicator Set for Analgesics](#)

### SUBMITTER

Arthritis Foundation

### DEVELOPER

Arthritis Foundation  
RAND Health  
University of Alabama at Birmingham

### ADAPTATION

Measure was not adapted from another source.

### RELEASE DATE

2004 Jun

### MEASURE STATUS

This is the current release of the measure.

### SOURCE(S)

MacLean CH, Saag KG, Solomon DH, Morton SC, Sampsel S, Klippel JH. Measuring quality in arthritis care: methods for developing the Arthritis Foundation's quality indicator set. Arthritis Rheum 2004 Apr 15;51(2):193-202. [PubMed](#)

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## **MEASURE AVAILABILITY**

The individual measure, "Quality Indicator 7. NSAID Selection: GI Bleeding Risk Factors and No Aspirin," is published in "Measuring Quality in Arthritis Care: The Arthritis Foundation's Quality Indicator Set for Analgesics."

For more information contact:  
Arthritis Foundation  
P.O. Box 7669  
Atlanta, GA 30357-0669  
Telephone: 404-872-7100 or 1-800-568-4045  
Web site: [www.arthritis.org](http://www.arthritis.org)

OR

RAND Health  
1776 Main Street  
P.O. Box 2138  
Santa Monica, CA 90407-2138  
Telephone: (310) 393-0411, ext. 7775  
Web site: [www.rand.org/health](http://www.rand.org/health)  
E-mail: [RAND\\_Health@rand.org](mailto:RAND_Health@rand.org)

## **NQMC STATUS**

This NQMC summary was completed by ECRI on August 7, 2007. The information was verified by the measure developer on September 10, 2007.

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